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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,845	02/18/2004	Norio Fujii	040894-7003	9430

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WASHINGTON, DC 20004

EXAMINER

TIMORY, KABIR A

ART UNIT	PAPER NUMBER
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2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/20/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/779,845	Applicant(s) FUJII, NORIO	
	Examiner Kabir A. Timory	Art Unit 2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-4 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/18/2004 & 2/22/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1&2 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohzeki et al. (US Patent Number 4,625,241).

Regarding claim1:

Ohzeki et al. discloses a timing adjusting apparatus comprising:

- an AD converter (figure 5) for receiving an input signal of which input signal level is converted into a digital signal to generate a digitized input signal (input waveform is interpreted to be input signal) (column 2, lines 59-65); and
- a counter circuit (figure 6, 57) to which the digitized input signal, a counter clock signal (figure 5, 48) and a trigger signal (input waveform is interpreted to be input signal) (column 2, lines 59-65) are provided so as to set a count number based on the digitized input signal and start counting the counter clock signal in response to the trigger signal, wherein an output signal is generated from the counter circuit at the timing of the counter clock signal reaching the count number (figure 5, 48, column 5, lines 58-63).

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Regarding claim 2:

Ohzeki et al. further discloses the digitized input signal is set as the count number when the trigger signal is input (column 4, lines 37-41).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohzeki et al. (US Patent Number 4,625,241) in view of Sakuragi et al. (US Pub Number 2002/0109620).

Regarding claim 3:

Ohzeki et al. discloses said AD converter is further comprising:
a binary-coded N-bit output counter for counting an input clock signal and carrying out a count operation repeatedly (figure 6, 57);
a latch circuit for inputting the N-bit output signal as data, latching the N-bit output signal, and outputting the latched N-bit output signal as the digitized input signal in accordance with a change of the comparison output signal (figure 6, 55).

Ohzeki et al. discloses all of the subject matter as described above except for specifically teaching a DA converter for converting an N-bit output signal of the binary-

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coded N-bit output counter into a counter analog signal, and outputting the counter analog signal; a comparator for comparing the input signal with the counter analog signal to output a comparison output signal.

However, Sakuragi et al., in the same field of endeavor, teaches a DA converter for converting an N-bit output signal of the binary-coded N-bit output counter into a counter analog signal (figure 1, 2), and outputting the counter analog signal; a comparator for comparing the input signal with the counter analog signal to output a comparison output signal (figure 1, 3).

One of ordinary skill in the art would have clearly recognized that in order to convert the output of the counter to a digital signal a D/A "digital to analog" converter is required. Furthermore, to compare the analog input signal with the output signal of the D/A converter to control the counter in accordance with the comparison result a comparator is added to the system. In order to convert the analog output of a counter and to compare the analog output with digital output, it would have been obvious to one ordinary skill in the art at the time the invention was made to include a D/A converter along with a comparator as taught by Sakuragi et al. in doing so we can attain accuracy in the system.

Regarding claim 4:

Ohzeki et al. further discloses, the counter clock signal is selected from one of the N-bit output signals (figure 6, 56, column 6, lines 45-49).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakamura et al. (US Patent Number 4,319,226) discloses a signal converter utilizing two clock signals, De Vilbiss et al. (US Pub Number 2003/0179123) discloses a analog to digital conversion using a counter, and Furuhashi et al. (US Patent Number 4,688,081) discloses apparatus for correcting time base error of video signal .

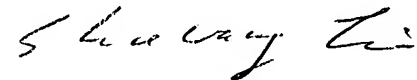
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kabir A. Timory whose telephone number is (571) 270-1674. The examiner can normally be reached on Mon - Thu 6:30AM - 4:00PM & Fri 6:30AM - 3:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571) 272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kabir A. Timory
April 13, 2007



SHUWANG LIU
SUPERVISORY PATENT EXAMINER